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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,526	04/27/2001	Robert Woolley Brunson	4750-000002	3732

27572 7590 12/29/2004

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EXAMINER	
IP, SIKYIN	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/844,526	BRUNSON, ROBERT WOOLLEY	
	Examiner	Art Unit	
	Sikyin Ip	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-30* is/are pending in the application.

4a) Of the above claim(s) *9-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 25-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-20 of U.S. Patent No. 5865913 to Paulin et al in view of USP 5447035 to Workman et al and Metals Handbook.

Paulin in claims 15-20, for example, discloses steps of cryogenic heat treating a quantity of components by gradually lower the temperature of said quantity of components to –300 °F by liquid nitrogen, holding said quantity of components at –300°F, gradually raising the temperature of said quantity of components to ambient temperature, tempering said quantity of components at 300°F, gradually lower the temperature of said quantity of components to ambient temperature, and including steps of repeatedly tempering. Paulin does not disclose the treatment of brake components and the reciting heat treatment conditions being a function of the cross sectional area of

the brake components. Workman in col. 3, lines 15-50 discloses the substantially same cryogenic thermal cycling processing steps could improve brake component wear. Paulin is directed to a method of improving component wear by cryogenic heat treatment (col. 1, lines 50-52) and Workman is directed to improve brake component wear resistant with the substantially same cryogenic thermal cycling processing steps (col. 1, lines 35-40 and col. 3, lines 15-50). Therefore, one of ordinary skill artisan would have been motivated to use cryogenic processing steps of Paulin to heat treat brake component as taught by Workman because both Workman and Paulin have shown that cryogenic heat treatment improves wear resistance and improve stress relief (Paulin, col. 1, lines 50-52; Workman, col. 1, lines 35-40).

With respect to the recited heat treatment conditions being a function of the cross sectional area of brake components which would have been inherently considered while Paulin or ordinary skill artisan determines heating and cooling conditions of components' heat treatment steps. As are evinced by Metals Handbook, 1948 Edition, page 613, Rate of Heating, paragraph bridging left and right columns; page 614, Cooling, fourth full paragraph at right column; page 622, Factors Determining the Design of Work Tanks; and paragraph bridging pages 626-627 that heat treatment (heating and cooling) conditions are always determined by factors of size, shape, weight, section of the part/component.

With respect to the limitation as in claim 27, the claimed "approximately 100 °F" reads on an ambient temperature.

With respect to claim 29 that the step of transporting components to a tempering oven would have been inherent done by the heating step of Paulin.

Claim Rejections - 35 USC § 103

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 25-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-20 of U.S. Patent No. 5865913 to Paulin et al in view of USP 5447035 to Workman et al and Metals Handbook.

Paulin in claims 15-20, for example, discloses steps of cryogenic heat treating a quantity of components by gradually lower the temperature of said quantity of components to –300 °F by liquid nitrogen, holding said quantity of components at –

300°F, gradually raising the temperature of said quantity of components to ambient temperature, tempering said quantity of components at 300°F, gradually lower the temperature of said quantity of components to ambient temperature, and including steps of repeatedly tempering. Paulin does not disclose the treatment of brake components and the reciting heat treatment conditions being a function of the cross sectional area of the brake components. Workman in col. 3, lines 15-50 discloses the substantially same cryogenic thermal cycling processing steps could improve brake component wear. Paulin is directed to a method of improving component wear by cryogenic heat treatment (col. 1, lines 50-52) and Workman is directed to improve brake component wear resistant with the substantially same cryogenic thermal cycling processing steps (col. 1, lines 35-40 and col. 3, lines 15-50). Therefore, one of ordinary skill artisan would have been motivated to use cryogenic processing steps of Paulin to heat treat brake component as taught by Workman because both Workman and Paulin have shown that cryogenic heat treatment improves wear resistance and improve stress relief (Paulin, col. 1, lines 50-52; Workman, col. 1, lines 35-40).

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(heating and cooling) conditions are always determined by factors of size, shape, weight, section of the part/component.

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With respect to claim 29 that the step of transporting components to a tempering oven would have been inherent done by the heating step of Paulin.

Response to Arguments

Applicant's arguments filed October 8, 2004 have been fully considered but they are not persuasive.

In response to applicants' argument that Paulin does not suggest to treat brake components. But, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been meet by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
December 27, 2004